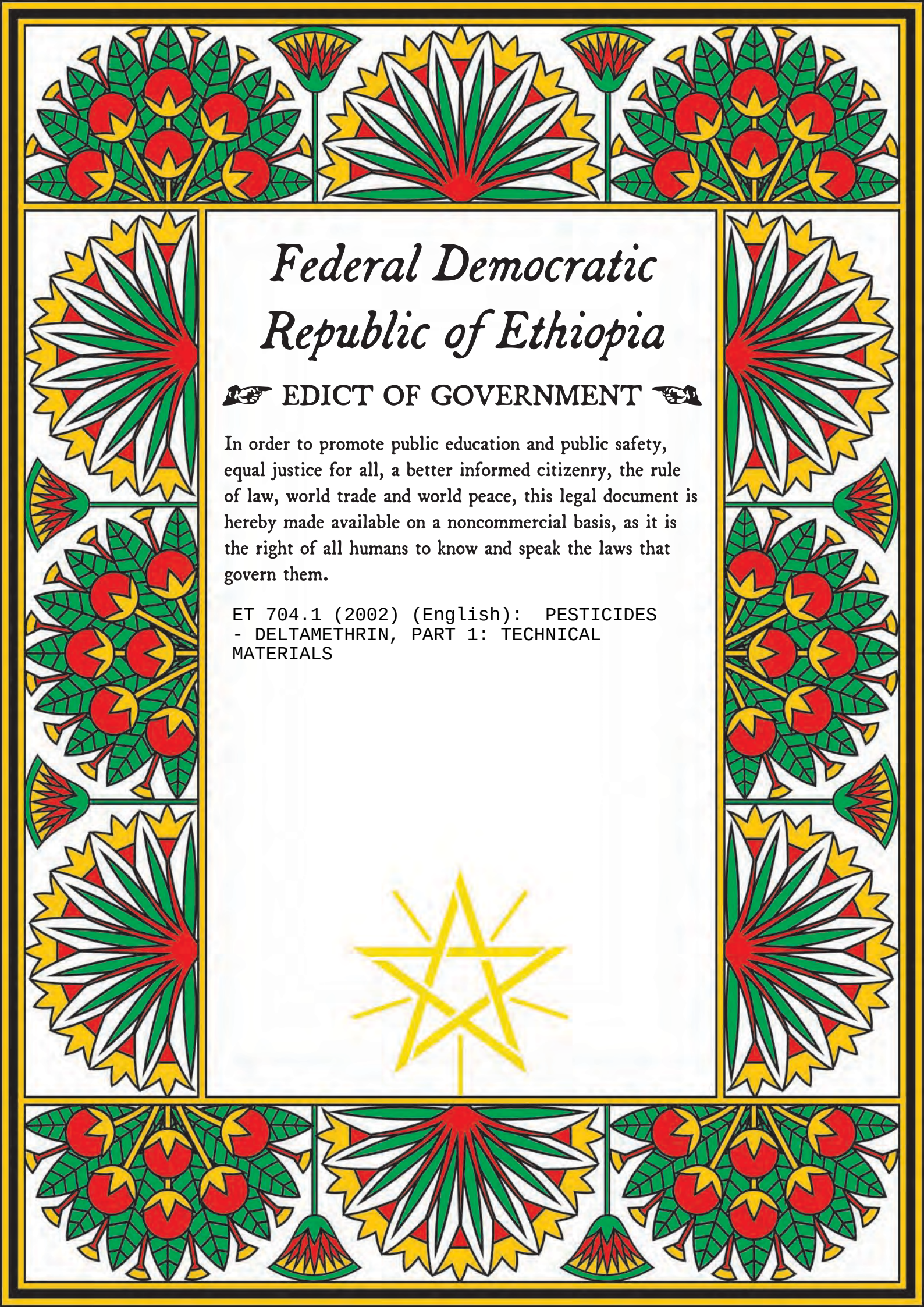




Federal Democratic Republic of Ethiopia

👉 EDICT OF GOVERNMENT 👈

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ET 704.1 (2002) (English): PESTICIDES
- DELTAMETHRIN, PART 1: TECHNICAL
MATERIALS



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**Pesticides — Deltamethrin
Part 1:
Technical material (TC) —
Specification**

ICS: 65.100.01

Published by Ethiopian Standards Agency

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Foreword

This Ethiopian Standard has been prepared under the direction of the Technical Committee for Pesticides (TC 19) and published by the Ethiopian Standards Agency (ESA).

The standard is a reaffirmation for reprint of the Ethiopian Standard ES 704-1:2002, Pesticide- Deltamethrin Part 1: Technical material (TC) Specification, with some editorial changes without altering the technical contents in the former text.

Pesticides — Deltamethrin

Part 1:

Technical material(TC) — Specification

1 Scope

This Ethiopian Standard specifies the requirements for the technical material of deltamethrin (for agricultural purpose).

2 Normative references

The following Ethiopian Standards contain provisions which, through reference in this text, constitute the provisions of this Ethiopian Standard. At the time of publication the editions indicated were valid. All standards are subject to revision and parties to agreements based on this Ethiopian Standard are encouraged to investigate the possibility of applying the most recent editions of the Ethiopian Standards indicated below. Registers of currently valid standards are maintained in the Ethiopian Standards Agency.

ES 693, *Pesticides - Terminology.*

ES 694, *Pesticides - Methods of sampling.*

ES 695, *Pesticides - Packaging.*

ES 696, *Pesticides - Guideline on good labelling practice.*

ES 697, *Pesticides - Guideline for retail distribution, storage and handling.*

ES 700, *Pesticides – Guideline on the disposal of bulk quantities of obsolete pesticides.*

ES 761, *Pesticides - Determination of deltamethrin content.*

WD¹⁾, *Pesticides – Determination of R-isomer in deltamethrin.*

WD²⁾, *Pesticides – Determination of acid chloride in deltamethrin.*

WD³⁾, *Pesticides – Determination of acid + anhydride in deltamethrin.*

WD⁴⁾, *Pesticides – Determination of optical rotation of deltamethrin.*

WD⁵⁾, *Pesticides – Determination of deltamethrin melting point.*

3 Definitions

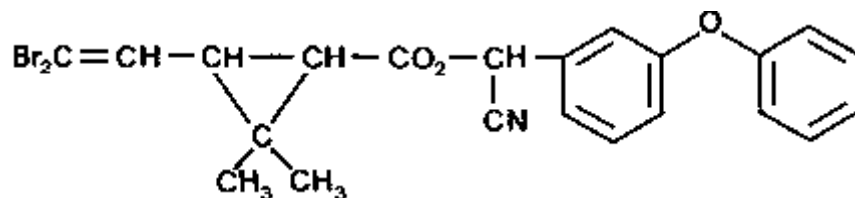
For the purpose of this Ethiopian Standard terms defined in ES 693 shall apply.

^{1), 2), 3), 4), 5)} under preparation

4 General information

COMMON NAME: Deltamethrin (ISO)

STRUCTURAL FORMULA:



EMPIRICAL FORMULA: $C_{22}H_{19}Br_2NO_3$

RMM: 505.2

CAS REGISTRY NUMBER: (52918-63-5)

CIPAC CODE NUMBER: 333

CHEMICAL NAMES:

(S)-2-cyano-3-phenoxybenzyl (1R, 3R)-3-(2,2-dibromovinyl)-

2,2-dimethylcyclopropanecarboxylate (IUPAC)

(1R)-[12(S*), 32]- cyano(3-phenoxyphenyl)methyl 3 -

(2,2-dibromoethenyl)-2,2-dimethylcyclopropanecarboxylate (CA)

CHEMICAL GROUP: Pyrethroid

USE CATEGORY: Insecticide

WHO CLASS: ii

5 Requirements

5.1 Description

The material shall consist of deltamethrin together with related manufacturing impurities and shall be a white to cream coloured crystalline powder free from visible extraneous matter and added modifying agents.

5.2 Active ingredient

5.2.1 Identity tests

Where the identity of the active ingredient is in doubt, it shall be determined in accordance with ES 761 and then it shall comply with at least one additional test.

5.2.2 Deltamethrin

The Deltamethrin content shall be declared in g/kg (not less than 980 g/kg) and, when determined in accordance with ES 761, the content obtained shall not differ from that declared by more than +/- 25 g.

5.3 Impurities

5.3.1 Deltamethrin R isomer

When determined in accordance with WD¹⁾ the maximum content of Deltamethrin R isomer shall be 10g/kg.

5.3.2 Acid chloride corresponding to Deltamethrin

When determined in accordance with WD²⁾ the maximum acid chloride content shall be 2g/kg.

5.3.3 Acid + anhydride corresponding to Deltamethrin

When determined in accordance with WD³⁾ the maximum acid + anhydride content shall be 10 g/kg.

5.4 Physical properties

5.4.1 Optical rotation

When determined in accordance with WD⁴⁾ the optical rotation of the product shall be $20^{\circ}\text{C} = 57 + 1.5^{\circ}\text{C}$.

D

5.4.2 Melting point

When determined in accordance with WD⁵⁾ the maximum melting point of the product shall be 98°C .

6 Handling

Pesticides shall be handled in accordance with ES 697.

7 Sampling

Samples shall be taken in accordance with ES 694.

8 Packaging

Pesticides shall be packed in accordance with ES 695.

9 Labeling

Pesticides labeling shall be in accordance with ES 696.

10 Disposal

Disposal of bulk quantities of obsolete pesticides shall be in accordance with ES 700.

11 Marking

Packages manufactured with the requirements of this Ethiopian Standard shall bear the Quality Mark upon approval by the responsible authority.



Organization and Objectives

The Ethiopian Standards Agency (ESA) is the national standards body of Ethiopia established in 2010 based on regulation No. 193/2010. ESA is established due to the restructuring of Quality and Standards Authority of Ethiopia (QSAE) which was established in 1970.

ESA's objectives are:-

- ❖ Develop Ethiopian standards and establish a system that enable to check whether goods and services are in compliance with the required standards,
- ❖ Facilitate the country's technology transfer through the use of standards,
- ❖ Develop national standards for local products and services so as to make them competitive in the international market.

Ethiopian Standards

The Ethiopian Standards are developed by national technical committees which are composed of different stakeholders consisting of educational institutions, research institutes, government organizations, certification, inspection, and testing organizations, regulatory bodies, consumer association etc. The requirements and/or recommendations contained in Ethiopian Standards are consensus based that reflects the interest of the TC representatives and also of comments received from the public and other sources. Ethiopian Standards are approved by the National Standardization Council and are kept under continuous review after publication and updated regularly to take account of latest scientific and technological changes.

Orders for all Ethiopian Standards, International Standard and ASTM standards, including electronic versions, should be addressed to the Documentation and Publication Team at the Head office and Branch (Liaisons) offices. A catalogue of Ethiopian Standards is also available freely and can be accessed in from our website.

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ESA, representing Ethiopia, is a member of the International Organization for Standardization (ISO), and Codex Alimentarius Commission (CODEX). It also maintains close working relations with the international Electro-technical Commission (IEC) and American Society for Testing and Materials (ASTM). It is a founding member of the African Regional Organization for standardization (ARSO).

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Standard Mark